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CYLINDROCLADIUM LEAF SPOT ON SPECIES OF ILEX

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The various cultivars of Ilex vomitoria Ait. and related Ilex spp. are cold-hardy, salt-tolerant, pest-free trees and shrubs which are adaptable to a wide range of Florida landscaping situations. The dwarf cultivars are used extensively as foundation shrubs, and the taller more upright hollies are considered excellent plants for creating topiary designs in various landscape schemes. Historically, the leaves of Ilex vomitoria were used by native indians as a medicinal tea which caused emetic or purgative results (2).

PATHOGEN AND HOST RANGE. Although the many cultivars of the various Ilex spp. have relatively few pest problems, the fungus Cylindrocladium avesiculatum Gill, Alf. and Sob. can cause a serious disease on Ilex cornuta Lindl. & Paxt. 'Rotunda' and 'Burfordi', I. crenata Thunb. 'Helleri', I. opaca Ait. 'Savannah' but most commonly occurs on I. vomitoria. It is also important to note that Rhododendron obtusum (Lindl.) Planch. and Pyracantha coccinea M. J. Roem. are susceptable hosts (1,3).

SYMPTOMS: This disease is characterized by severe leaf spotting, defoliation, twig dieback and, in the case of newly established plants or cuttings, death may occur (3). Initial symptoms consist of minute chlorotic spots which become circular to subcircular, dark purple to black and may increase in size to 1-4 mm on I. vomitoria (Fig. 1) and up to 15 mm on larger leaved hollies. Both young and old leaves can be infected by this fungus. Affected leaves absciss easily, twigs become infected, and under favorable environmental conditions such as warm temperatures, high humidity and excessively wet foliage, the disease may prove fatal (Fig. 2). The fungus sporulates readily on abscissed leaves on soil surface and can often be found fruiting on heavily infected foliage prior to leaf drop (3). Inoculum is spread by rain splash.

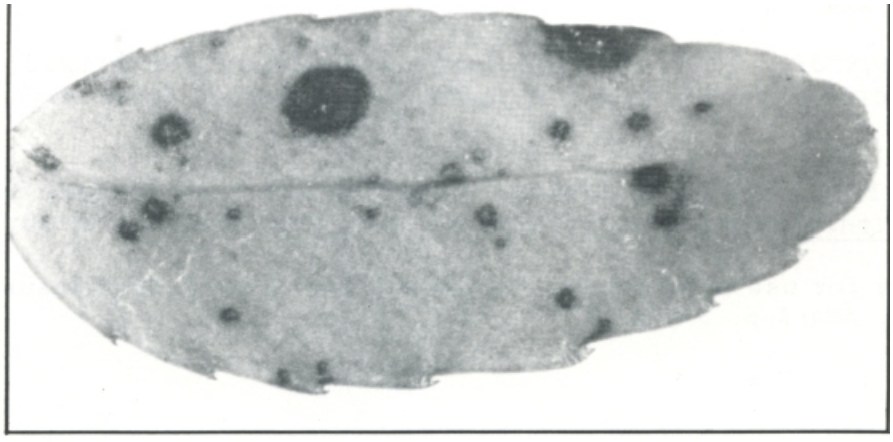

Fig 1. Characteristic dark purple to black circular leafspots on Ilex vomitoria caused by Cylindrocladium avesiculatum.

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Fig 2. Advanced symptoms of Cylindrocladium leaf spot showing severe defoliation and twig dieback. Pictured from right to left; healthy to severely infected plants.

CONTROL. In containerized nursery situations, Cylindrocladium leaf spot can be controlled with foliar applications of a benomyl/mancozeb mix (4) with spreader-sticker, used in tandem with the reduction of overhead watering and adjustment of spacing to allow for maximum aeration between plants. Protection of holly cuttings in a misting bed becomes extremely difficult if the fungal inoculum is present. Starting with uncontaminated rooting media and plant material is an absolute necessity. An initial protective benomyl/mancozeb spray on stock plants prior to taking cuttings may prove beneficial. If infection does occur, rogue infected plants, apply fungicide at regular intervals and keep the foliage as dry as possible.

SURVEY AND DETECTION. Infected plants exhibit dark purple or black circular leaf spots followed by severe defoliation. Blackened necrotic stem tips and branches may also be attributed to this disease. Sporulation of the fungus on fallen leaves is easily visible with a hand lens and appears as minute white tufts on both surfaces of infected leaves.

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